

**Abstract**

The invention makes possible the one-step production of molded bodies (1) of different types out of thermoplastic material with or without reinforcing fibers. For this purpose, a tool with a lower and an upper shell mold (10a, 10b), which form defined surfaces on both sides, is utilized. The shell molds have thin walls and are made out of metal and comprise a centered portion on both shell molds, a displacement compensating, air-tight edge seal (16) and tempering means (13) for the controlled heating and cooling on both shell molds. For the production thermoplastic material (2) with reinforcing fibers (3) is inserted into the shell molds in a locally defined manner, the shell molds are subsequently evacuated (p1) and in doing so pressed together (ds), thereupon heated up to above the melting point and maintained at a temperature (Ts) for the consolidation and flowing of the thermoplastic material under pressure (dp) up to the contour-filling flowing out. Thereupon a cooling down under pressure in a defined manner takes place until the inserted material has completely solidified. This economical and automatable method enables the production of molded bodies using different materials, designs and shapes and with pore-free visible surfaces on both sides.

(Figure 1)